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## AMINE AND QUATERNARY AMMONIUM SALT DERIVATIVES OF GLYCIDYL ETHERS AND GLYCIDYL ESTERS

## ABSTRACT OF THE DISCLOSURE

A composition of matter is disclosed comprising a compound of the structural formula:

$$R_{1} = \begin{bmatrix} H_{2} & H_{2} & (R_{5})_{m} \\ C & H & C \\ N & R_{3} \end{bmatrix}$$

$$(X)_{m} = \begin{bmatrix} H_{2} & H_{2} & (R_{5})_{m} \\ R_{1} & C & R_{4} \end{bmatrix}$$

wherein

 $R_1$  is  $C_8$  to  $C_{22}$  alkyl,  $C_8$  to  $C_{22}$  alkenyl,  $C_8$  to  $C_{22}$  ester alkyl,  $C_8$  to  $C_{22}$  ester alkenyl,  $C_8$  to  $C_{22}$  amido alkyl, or  $C_8$  to  $C_{22}$  amido alkenyl;

Q is  $C_pH_{2p}O$ ;

n is an integer of from 0 to 60;

p is an integer of from 2 to 4;

 $R_2$  is hydrogen, alkyl or ester alkyl of from 1 to 22 carbon atoms, or  $Q_1$ ;

 $Q_1 \text{ is } (C_p H_{2p} O)_{n1} H;$ 

 $R_3$  is hydrogen, alkyl of from 1 to 22 carbon atoms, or  $Q_2$ ;

20  $Q_2$  is  $(C_pH_{2p}O)_{n2}H$ ;

 $R_4$  is hydrogen, alkyl of from 1 to 22 carbon atoms, or  $Q_3$ ;

 $Q_3$  is  $(C_pH_{2p}O)_{n3}H$ ;

 $R_5$  is hydrogen, alkyl of from 1 to 22 carbon atoms, oxygen, betaine, amido amine, polyamine, polyamine alkoxylate, fatty amine, or  $Q_4$ :

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 $Q_4$  is  $(C_pH_{2p}O)_{n4}H$ ;

n1, n2, n3, and n4 are independently selected from the group consisting of integers of from 1 to 60;

X is a counterion selected from the group consisting of species generated from mineral or organic acids;

m is 0 or 1; and

z is 1 to 4.

Methods of making the composition and articles containing it are also disclosed.